

MARINE CORPS WARFIGHTING LABORATORY

Reconnaissance, Surveillance and Target Acquisition (RSTA) is one of the Marine Corps Warfighting Lab's (MCWL) primary areas. Through Project RSTA, the MCWL is developing a proposed reconnaissance, surveillance and target acquisition network that will support the warfighter by enabling enhanced situational awareness, improved decision-making and a common understanding of the battlespace between units and commanders.

Description: Project RSTA is addressing ground reconnaissance and the capability to acquire timely intelligence about an adversary that will enable decisive maneuver and the application of combat force. Project RSTA is an umbrella project that integrates the development of a sensor grid and its various sensor components into a coherent tactical system. The sensor grid is composed of several sensors—human, automated and unmanned ground and aerial vehicles—spread across the battlespace. The sensors will provide multiple information feeds into a central processing system. The networked result is the RSTA Grid. The information gained by the sensors will be translated into a battlefield “picture” that is a near-real-time graphic representation of the RSTA Grid. The centerpiece of the system is the capability to collect, display and distribute the data via a seamless, information-sharing network.

Once the data input from the sensor feeds is networked and processed, an accurate picture of the battlespace will be portrayed on display systems or battlefield visualization tools. The tactical unit and the commander will access the same information through these visualization tools, enabling them to achieve situational awareness and a common vision of the battlespace. This system will allow them to identify and exploit surfaces or gaps in enemy positions and conduct precision engagement to achieve their objectives. The

RECONNAISSANCE, SURVEILLANCE AND TARGET ACQUISITION

fact sheet



RSTA Grid is intended to be a tactical system that functions from the smallest level (the tactical unit or individual sensor) up to the unit commander. It will be compatible with other RSTA collection systems including the U.S. Navy's expeditionary sensor grid. It will also adapt to a variety of communication pathways through the use of standard signal protocols.

Deliverable Products: Initial elements of the sensor grid are being used in a series of proof-of-concept experiments.

info: **Public Affairs Office:** (703) 784-5170
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3255 MEYERS AVENUE
QUANTICO, VA 22134
WWW.MCWL.QUANTICO.USMC.MIL